



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,063	02/11/2004	John S. Benco	1657/2052	2112

29932 7590 08/31/2006

SONNENSCHN NATH & ROSENTHAL LLP
FOR PAULA EVANS
P.O. BOX 061080
WACKER DRIVE STATION, SEARS TOWER
CHICAGO, IL 60606-1080

EXAMINER

SODERQUIST, ARLEN

ART UNIT	PAPER NUMBER
----------	--------------

1743

DATE MAILED: 08/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action
Before the Filing of an Appeal Brief**

Application No.

10/776,063

Applicant(s)

BENCO ET AL.

Examiner

Arlen Soderquist

Art Unit

1743

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 21 August 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☒ Applicant's reply has overcome the following rejection(s): See Continuation Sheet.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: _____.
Claim(s) objected to: _____.
Claim(s) rejected: 1-13 and 16-53.
Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08 or PTO-1449) Paper No(s). _____
13. ☐ Other: _____.



Arlen Soderquist
Primary Examiner
Art Unit: 1743

Continuation of 5. Applicant's reply has overcome the following rejection(s): the 35 USC 112 first paragraph rejection as it pertains to claims 16-27.

Continuation of 11. does NOT place the application in condition for allowance because: of the reasons of record and the following comments. Relative to the lack of enablement examiner notes that there is no limitation on the length, size or branching present in the alkyl group. Thus the compounds cover a large number of possible compounds. There is a substantial amount of structural variation possible for the alkyl groups alone which is what examiner used as the initial basis for the rejection. The other groups that the instant amendment cancels from the claims were added variation of structure that would have been recognized by one of ordinary skill in the art to affect the ability of the calixarenes to bind with lithium. The language of the claims includes alkyl groups having a single carbon (a methyl group) up to any number of carbons or any branching pattern. The possibility of unsaturation in the alkyl group further complicates the structural properties. Since steric hindrance of the R groups is a clear property that affects that ability of the calixarene binding to metals, a minimal disclosure of one compound does not teach or provide an expectation to one of skill in the art that any alkyl group will exhibit the required selectivity to lithium. The reason for citing the paper of applicant's work was to show that there is no indication that applicant has made any other calixarene within the scope of the instant claims that has the required lithium selectivity. If such calixarenes exist that applicant or another has made, a declaration would show that there are other calixarenes within the instant claim scope that have the required lithium selectivity. Relative to the issue of steric effects, having all of the R groups identical would have been recognized by one of ordinary skill in the art to present a range of steric hindrance. For example the R group being all hydrogen, propyl or t-butyl would have been recognized by one of skill in the art to present a range of steric effects. It is questionable whether any of these three calixarenes would show the required lithium selectivity. Since it is recognized that the type, shape and size of the R group affects the ability of a calixarene to bind lithium, simple arguments are not sufficient to overcome the enablement issues.

Relative to the art and obviousness type double patenting rejections, examiner points out that. examiner simply proposed that one of ordinary skill in the art would have done what Benco or Kim did: design a calixarene for lithium based on a known azacrown compound having selectivity toward lithium. Thus if Benco and Kim can use a known crown compound to design a calixarene, it would certainly have been obvious for one of ordinary skill in the art to use the Pacey structure to design a calixarene for lithium which the Pacey reference clearly teach as a metal that there is a need or desire to analyze in a sample. As such those references provide a clear expectation that a calixarene can be designed using a crown compound as a guide.